

Serial No. 10/666,294  
Amendment dated April 12, 2006  
Reply to Office Action of January 12, 2006

### **REMARKS**

Reconsideration of this application and the rejection of claims 1-17 and 26-32 are respectfully requested. Applicants have attempted to address every objection and ground for rejection in the Office Action dated January 12, 2006 (Paper No. 20060106) and believe the application is now in condition for allowance. The claims have been amended to more clearly describe the present invention.

The Specification has been amended to correct typographical and grammatical errors. No new matter has been added to the application.

Applicants acknowledge that the previously filed election with traverse of claims 1-17 and 26-32 was found persuasive.

The Abstract has been objected to because it contains brackets. Accordingly, Applicants have amended the Abstract to remove the brackets, and submit that as amended, the Abstract is in proper form.

Claims 26-32 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Specifically, the Examiner contends that claim 26 fails to recite a manipulative step. Accordingly, Applicants have amended claim 26 to recite the use of the formula in providing cementitious panels having a desired fiber surface area fraction. Support for this amendment is found in pages 14-21 of the specification. Therefore, Applicants submit that as amended, claim 26 distinctly claims the subject matter regarded

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as the invention, and respectfully traverses the rejection of claims 26-32 under 35 U.S.C. §112.

Claims 1-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Miller et al. (U.S. Pat. No. 4,793,892) in view of Dinkel (U.S. Pat. No. 3,284,980). Miller discloses an apparatus for producing reinforced cementitious panel webs by first including a web of fiberglass. A layer of slurry is carried on a roller and pushed into and through the openings in the mesh of fiberglass. In Col. 1, Miller specifically discusses Dinkel '980 and describes the reference's drawbacks of producing fabric reinforced panels. Among other things, "Major problems are encountered in the manufacture of such fabric reinforced panel webs, in the handling and placing of the web of reinforcing fabric on the core layer and in the application of a proper amount of the cementitious material to the reinforcing web to obtain effective bonding of the web layers to the core layer." (Miller, Col. 1, lines 42-48). Miller also discusses the prior art problem of obtaining proper penetration and bonding of the mesh to the core.

Applicants respectfully disagree with the Examiner's position that Miller discloses the deposition of fibers on a moving web. Miller is directed to the use of a fabric web, which is preferably made of fiberglass mesh. While other types of mesh fabric are contemplated, there is absolutely no description of the use of loose fibers, as

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recited in the present claims. Furthermore, the lack of such a web as the reinforcing element of the panel would defeat the purpose of Miller's process.

As seen in Col. 1 of Miller, the Dinkel '980 reference is criticized due to its poor strength and bonding characteristics. If anything, instead of an incentive to combine, there is a definite teaching in Miller to disregard the teaching of Dinkel. Even assuming, *arguendo* that Dinkel is relevant here, the secondary reference discloses a hydraulic cement panel with fiber reinforced high density surface layers. The fiber layers are shown and described as being made of different fibers, but are referred to as being in a woven mesh or similar makeup (Col. 3, lines 21-22, 24, 29-31, 43-47; Col. 6, lines 11-12). Throughout the reference in the passages quoted above, the fiber layer is described as being woven or having interstices. As such, loose fibers as presently recited are not contemplated.

In addition, neither reference discloses or suggests the step of active embedment of the loose fibers into the slurry. In Dinkel, embedment is performed by gravity (FIGs. 6-11, Col. 4, lines 32-75). Miller describes a totally different system where rollers are used to pump slurry into the interstices of a fabric web, which is then laid upon a substrate or previously deposited webs to form a reinforced panel (FIGs 1-5; Col. 7). Only passive embedment is disclosed (Col. 7, line 30-33), but that is only in the context of pressing the fabric web into the slurry.

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In contrast, as amended, claim 1 recites, among other things, one of depositing a first layer of individual, loose fibers upon the web and depositing a layer of settable slurry upon the web, depositing a second layer of individual, loose fibers upon the slurry and actively embedding said second layer of individual, loose fibers into the slurry. Neither Miller nor Dinkel describe the application and embedment of loose fibers as now recited.

Further, it is the combination of the loose fibers, and the active embedment of those fibers which provides a more uniform dispersal of fibers within the panel and thus results in a panel which is superior in performance to prior art panels using discrete webs of reinforcing cloth, as cited by the Examiner. The more uniform composition of the present panel is easier to fasten with nails, and lacks the problems of bonding discrete layers as described by the prior art. The present process is also more economical than that described by Dinkel or Miller, since extra additives such as the cement of Dinkel, or the web handling apparatus of Miller are no longer needed.

In addition to the above arguments, claims 9-11 have been amended to more clearly recite the active embedment of the present process. As amended, claim 9 recites performing said active embedding step by creating a kneading action in said slurry. Claim 10 as amended further includes providing a self-cleaning embedment device for performing said active embedding step. Claim 11 further includes performing

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said active embedding step by multiple applications of kneading force. None of these procedures are disclosed or contemplated by the cited references.

As amended, claims 8, 9, 10 and 12 have been revised to be directed to process steps rather than apparatus limitations.

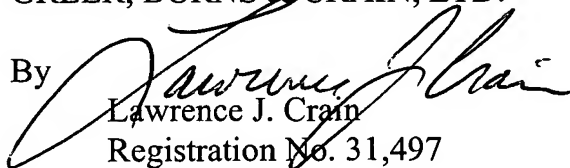
Accordingly, the rejection based on a combination of Miller and Dinkel is respectfully traversed.

In view of the above amendments, the application is respectfully submitted to be in allowable form. Allowance of the rejected claims is respectfully requested. Should the Examiner discover there are remaining issues which may be resolved by a telephone interview, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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